

Amendments to and Listing of the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently amended) Wireless network system, comprising:
 - a first access point for providing a first communication channel to a first terminal;
 - a second access point for providing a second communication channel to a second terminal;
 - wherein the first and second communication channels are wireless channels;
 - wherein the first access point is adapted to build builds up a third communication channel to the second access point to coordinate a setting of the first and second communication channels;
 - wherein the first access point is adapted to perform performs a detection for the second access point;
 - wherein the first access point is adapted to establish establishes the third communication channel to the second access point when the second access point is detected via at least one of a core network and a wireless channel;
 - wherein the first access point is adapted to determine determines whether there is a first free channel and a second free channel; and
 - wherein, in case there are first and second free channels, the first access point is adapted to control controls a setting of the first and second communication channels on the basis of the first and second free channels; and
 - wherein, in case there are no first and second free channels, the first access point:
 - determines a first interference and channel usage map;
 - requests a second interference and channel usage map from the second access point;
 - determines an optimized channel lay-out on the basis of the first and second interference and channel usage maps; and

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controls the setting of the first and second communication channels on the basis of the optimized lay-out.

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Currently amended) The wireless network according to claim [[4]] 1, wherein a plurality of third access points is assigned to the first access point for coordinating communication channels to associated terminals; and wherein a plurality of fourth access points is assigned to the second access point for coordinating communication channels to associated terminals.

6. (Original) The wireless network of claim 1, wherein the first and second communication channels correspond to first and second frequencies in the ISM band.

7. (Currently amended) Access point device for a wireless network system, wherein the access point device ~~is adapted to: provide~~ provides a first communication channel to a terminal; and ~~build~~ builds up a second communication channel to another access point to coordinate a setting of the first communication channel; wherein the first and second communication channels are wireless channels;

wherein the access point device ~~is further adapted to: perform~~ further performs a detection for the other access point; and ~~establish~~ establishes a second communication channel to the other access point when the other access point is detected via at least one of a core network and a wireless channel;

wherein the first access point ~~is further adapted to: determine~~ further determines whether there is a first free channel; and

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wherein, in case there is the first free channel, the first access point ~~is further adapted to control~~ further controls a setting of the first communication channel on the basis of the first free channel;

wherein, in case there is no first free channel, the first access point further:

determines a first interference and channel usage map;

requests a second interference and channel usage map from the other access point;

determines an optimized channel lay-out on the basis of the first and second interference and channel usage maps; and

controls the setting of the first communication channel on the basis of the optimized lay-out.

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Currently amended) Method of operating an access point of a wireless network, the method comprising ~~the steps of:~~

providing a first communication channel to a terminal;

building up a second communication channel to another access point to coordinate a setting of the communication channel;

performing a detection for the other access point;

establishing a second communication channel to the other access point when the other access point is detected via at least one of a core network and a wireless channel;

determining whether there is a first free channel;

in case there is the first free channel:

controlling a setting of the first communication channel on the basis of the first free channel ~~in case there is the first free channel;~~

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in case there is no first free channel:

determining a first interference and channel usage map ~~in case there is no first free channel;~~

requesting a second interference and channel usage map from the other access point ~~in case there is no first free channel;~~

determining an optimized channel lay-out on the basis of the first and second interference and channel usage maps; and

controlling the setting of the first communication channel on the basis of the optimized lay-out.

12. (Cancelled)